

## ABSTRACT

The concentrations of fluorescent dyes in a target sample (1) are measured using an imaging device (30). This imaging device has detection wavelength bands. Reference samples each containing only one of the fluorescent dyes respectively at predetermined unit concentrations, and a measured intensity of fluorescence emitted from each reference sample is measured in each detection wavelength band. A fluorescence image of the target sample is taken in each detection wavelength band using the imaging device. An operation is executed using the fluorescence intensities acquired from the reference samples and target sample to calculate the concentrations of the respective fluorescent dyes in the target sample.